

REMARKS

Claims 1, 3-6 and 8-18 were earlier pending in the application. All claims stand rejected. Reconsideration is requested.

Claim Objections

First, the Examiner rejected added Claims 16-18 under 37 CFR 1.75(c) as failing to limit the subject matter of a previous claim. The Examiner said:

Specifically, Claims 15-18 inherit from Claims 1, 5, 6, and 10, which disclose modifying the blanking interval of a video signal which is part of the baseband. . .However, Claims 15-18 disclose modifying an arbitrary portion of the baseband. . .thus being further broadening rather than further limiting.

In accordance with the Examiner's objection, Claims 15-18 have been canceled, but also the recitation of "baseband" has been incorporated in each of independent Claims 1, 3, 5, 6, 8 and 10. Since as the Examiner pointed out, blanking intervals are in fact present in baseband video, adding the term "baseband" to each of these claims does not further limit the claim but is a clarification. Hence this amendment is not for reasons of patentability but for clarification of the claims, as further discussed below.

Therefore the objection to Claims 15-18 is moot.

Additionally, the term "video" is added to the final clause of Claims 1 and 3 to conform to the form of the other claims; again this is a clarification, is not intended to be limiting, and is not for reasons of patentability.

Rejections

Claims 1, 4, 6, 9, 11, 13, 15 and 17 stand rejected under 35 U.S.C. §103(a) as unpatentable over Hashimoto in view of Thompson.

As regards the remaining claims, all stand rejected under 35 U.S.C. §103(a) as unpatentable over Hashimoto in view of Kachikian.

All rejections are traversed, for the reasons set forth below.

As the Examiner understands, in accordance with the invention data is transmitted in a baseband video signal. Moreover the data is transmitted in the video blanking interval in such a way that it is not recorded by particular video recorders. This has the advantage of permitting transmission of the data in addition to the normal video signal so that the data can, for instance, be received and used by a television set, but the typical video recorder does not record the data. Hence the data is "hidden" for transmission, of for instance copy control data so that the video recorder does not record the data. Hence this allows transmitting data to a compliant TV set for copy control or descrambling without permitting the relevant information to be recorded. This effectively inhibits recording since any resulting video recording will not have the crucial control or descrambling data.

The Examiner rejected Claims 1 and 3 citing in combination Hashimoto and Thompson. With respect to Thompson, the Examiner stated:

Thompson '046 discloses video security system. Specifically, Thompson '046 discloses: wherein the predetermined part of the modified signal is not recorded by particular video recorders. . .note that the Thompson '046 system scans frequencies, including those that are beyond the recording means of particular video recorders.

Further, the Examiner stated the motivation for the combination is that:

The motivation to combine is suggested by Thompson '046 which discloses that application of the system of Thompson '046 provides a particularly flexible security means for video data such as that of Hashimoto '601. . .

Claims 1 and 3 are Patentable

However, it is respectfully pointed out that the combination of references is first, not properly motivated, and second, even if carried out would not meet the Claim 1 method. As the Examiner points out, Hashimoto discloses transmitting descrambling data in the vertical blanking interval of a video signal, see Hashimoto, column 10, lines 46-51 and column 20, lines 45-50. As further illustrated in Figs. 1A and 1B of Hashimoto, the descrambling values are at A in the video signal in the horizontal synchronization portion.

Hence clearly Hashimoto Figs. 1A and 1B, and similar Hashimoto Figs. 16A and 16B showing a second embodiment, are operating in baseband video. As the Examiner pointed out in his objection to Claims 15-18, the blanking intervals (including the corresponding horizontal synchronization portions) are inherently in baseband video.

In contrast, Thompson does not teach putting any data in baseband or in any video. Instead his data is transmitted as an FM band signal which is not a part of the baseband video since it has its own carrier, in the FM band. This is brought out at several points in the Thompson disclosure. See Thompson, column 3, beginning line 8:

The custom gate array receives the data code and object code from the frequency agile receiver. . .

See also Thompson column 5, beginning line 65:

The dynamic gate array 29 feeds the formatted data to a transmission modulator 33 which transmits the formatted data via any desirable signal carrier 35 to the customer's location. For example, the formatted signal may take the form of an FM radio signal frequency shift keyed. [emphasis added.]

There is further description of the transmission in terms of the corresponding receiver at Thompson column 6, beginning line 43:

The receiver 61 is a frequency agile device which tunes across the FM band in search of data to be passed on to a custom gate array 63. A tuning

line 65 between the custom gate array 63 and the signal seeking data receiver 61 sets the receiver 61 at an appropriate frequency and data is transferred via a data transfer line 67 from the signal seeking data receiver 61 to the custom gate array 63. [emphasis added.]

Hence it is clear that Thompson is not transmitting his data in a video signal or baseband video or even as a TV signal, but as a separate FM radio signal in the “FM band” which of course is different from the TV band (spectrum). FM band means the assigned commercial FM radio station spectrum. Hence it is clear that the “frequency agile receiver” and the “FM radio signal” refer in Thompson to the carrier signal which carries the data in the FM band. Of course this would be separate from the television band carrying the video signal. Hence it is clear in Thompson that the data is transmitted as a separate FM band frequency scanned signal which is not a part of baseband video or part of video at all, and has its own carrier signal which is the FM band carrier. Hence there is no particular relationship between the Thompson data and any horizontal or vertical blanking intervals of the video since in Thompson the data is transmitted separately from video.

In summary, Hashimoto puts scramble data in the video vertical blanking intervals while Thompson transmits his data outside the television band in the separate FM band.

Hence the present rejection fails on two fronts. First, there is not proper motivation to combine the teachings of the two disclosures. The Thompson data signal admittedly would not be recorded by a typical video recorder because it is in entirely frequency separate band from television. Moreover, of course, video recorders, to the extent they include TV tuners, tune only to television channels, not to the FM band. Hence the reason that the Thompson data signal, as pointed out by the Examiner, is not recorded by a video recorder is because it has nothing to do with video or with television signals. Hence the Examiner’s cited motivation is inadequate since on reading the Thompson disclosure one of ordinary skill in the art would understand that Thompson requires a separate radio tuner for the FM band different from the television tuner typically present in video recorders. Hence the Thompson approach is not appropriate for use with the typical conventional TV transmission system since additionally no conventional television set would receive the Thompson data signal which is also outside the tuning band of a television set.

The Examiner's cited motivation for the combination thus is inadequate. The Examiner cited the flexibility of the security system in Thompson. However, Thompson actually is peculiarly inflexible since it requires additional FM band transmitters and tuners from those normally present in video equipment.

Second, the suggested combination does not meet the current claims. If one were to combine the two teachings, presumably one would put the scrambling data of Hashimoto in a separate FM band signal as taught by Thompson, not in the vertical blanking interval of baseband video. Hence the combination fails to meet the present claims because Claim 1 recites in its third clause "modifying a predetermined part of the baseband video signal by inserting therein the encoded data;". Of course, there is no inserting of any data in "baseband video" in Thompson. In fact, there is no inserting any data in any video signal in Thompson, since instead in Thompson the data is carried by the separate FM band radio signal.

Note that the amendment here to Claim 1 to insert the word "baseband" in the preamble and the third clause is intended only to be clarifying as pointed out by the Examiner, since the blanking interval is inherently part of baseband video.

Hence Claim 1 distinguishes over the references for these two reasons, that first the motivation to combine the references is not proper, and second even if combined they fail to meet the claim, except to the extent the Examiner used the claim itself as a template for picking and choosing elements from each of the two references. Hence Claim 1 distinguishes over the combination of these two references, as also does Claim 6 similarly rejected, and all claims dependent thereon.

Other Rejections

The other independent Claims 3, 5, 8 and 10 stand rejected citing Hashimoto in combination with Kachikian. The Examiner stated in pertinent part that:

However, Hashimoto '061 does not explicitly disclose: wherein the predetermined part is in also below a selected voltage level.

Kachikian '836 discloses the cryptographic technique of "weak bits" in which the voltage of a signal is lowered as to provide an ambiguous value to a reader (Kachikian '836: col. 2, ln. 60 to col. 3, ln. 9).

Claims 3, 5, 8 10 are Patentable

However, it is respectfully submitted that the Examiner has not properly interpreted the significance of the so-called "weak bits" in Kachikian. See Kachikian, col. 3, beginning line 26:

...provide positive synchronization of the read data on each side of the transition 26, in which the ambiguity-creating phase variation of this invention occurs. [emphasis added.]

As will be seen in FIG. 2, the position of the transition 26 in the key sequence 24 of the key byte 22 is variable (dotted lines) between a clear 1101 (solid line) and a clear 1011 (dot-dash lines). In each successive repetition. . .the transition 26 is moved to the right in FIG. 2 by a predetermined increment. . . Somewhere in the central portion of the series of copy protection words 20, an ambiguity will therefore arise which will cause the read head of the disc drive to read inconsistent data on successive reads of the copy protection word series. This ambiguity may include occasional reads of 1001 if a transition right on the boundary between two read intervals is not detected at all. [emphasis added.]

Hence the "weak bits" in Kachikian are in the digital recording domain where it is the transition between the zero bits and the one bits being rendered ambiguous by the phase variation. There is a time (phase) shift between the one-zero transitions making it hard to detect same. There is in Kachikian no reduction of signal amplitude which of course would not be appropriate in the context of digital recording, and so in Kachikian the actual signal amplitudes are not relevant since it is the transitions in terms of their location in time (phase) which provide the "weak bits" and hence the ambiguity.

Therefore, it is respectfully submitted that the Examiner in citing Kachikian and indicating that Kachikian detects that the voltage of a signal is lowered as to provide an ambiguous value to a reader, is a misconstruction of Kachikian. The Examiner cited Kachikian column 2, line

60 to column 3, line 9 but again this is a description of the “weak bits” and there is no indication of any change in signal amplitude because instead it is the one-zero transitions which are changed in time (phase). “Weak” in this context does not refer to or even suggest a reduction in signal level.

Hence Kachikian discloses nothing like, as recited for instance in Claim 3, “the predetermined part is also below a selected voltage level.” Kachikian instead discloses the phase shift. Thus even the combination of Kachikian with Hashimoto fails to meet Claim 3 at least since neither reference discloses the relevant feature of Claim 3 and hence the rejection is unsupported, and it is requested that it be reconsidered and withdrawn.

Note that Claim 3 and Claims 5, 8 and 10 (also rejected citing Hashimoto and Kachikian) have been amended similar to Claim 1 to recite “baseband” video for clarification. Again this is not limiting since as pointed out by the Examiner, this was inherent in the claims prior to the addition of the word “baseband”.

Independent Claims 5, 8 and 10 were rejected on the same grounds as Claim 3 and similarly distinguish over the combination of Hashimoto and Kachikian for at least the same reasons as pertain to Claim 3. Similarly the claims dependent on these claims also distinguish for at least the same reason as each of the base claims.

Therefore, it is requested that the Examiner pass this case to issue with all pending Claims 1, 3-6 and 8-14 allowed. In view of the above, all presently pending claims in this application are believed to be in immediate condition for allowance. Accordingly, the Examiner is respectfully requested to withdraw the outstanding rejection of the claims and to pass this application to issue. If it is determined that a telephone conference would expedite prosecution, the Examiner is invited to telephone the undersigned at the number given below.

In the event the U.S. Patent and Trademark Office determines that an extension and/or other relief is required, applicant petitions for any required relief including extensions of time and authorizes the Commissioner to charge the cost of such petitions and/or other fees due in connection

with the filing of this document to Deposit Account No. 03-1952 referencing docket no.136922002300.

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Respectfully submitted,

By 

Norman R. Klivans

Registration No.: 33,003
MORRISON & FOERSTER LLP
755 Page Mill Road
Palo Alto, California 94304
(650) 813-5850